From: Susan Chang
To: Davis, Kris

Subject: Point Wells Urban Center Application - Failure to adequately address geologic hazards

**Date:** Tuesday, May 15, 2018 8:16:51 PM

## Honorable Peter Camp:

I am writing to request that you deny the Point Wells Urban Center Application based on the Snohomish County Department of Planning and Development Services and Public Works recommendations. In addition, I offer additional comments regarding geologic hazards at the site from my perspective as a licensed civil engineer with geotechnical expertise, my experience as a supervisor of geotechnical and critical areas reviewers for a nearby municipality, and as a resident of Richmond Beach in Shoreline.

The geologic reconnaissance, subsurface explorations, groundwater head measurements, and preliminary slope stability analyses described in the Subsurface Conditions Report (Hart Crowser, April 20, 2018) indicate a marginally stable to unstable slope. Given the significant height and steepness of the slope, as well as landslide history at the site and nearby sites, it is apparent that stabilizing the slope will be necessary to provide the required second access road and to allow buildings on the Upper Bench. The submitted information fails to prove that either of these items can be done safely.

Sites with lesser landslide hazards can reasonably delay more detailed subsurface exploration and design to later stages because engineering experience tells us that it will be possible to design a cost-effective solution. In the case of the Point Wells site, the magnitude of the work that would be needed to provide the required factors of safety for slope stability and support of the roadway will be immense. In addition, issues such as easements for the road have not been resolved. Preliminary engineering of the second access road, including resolution of easement and drainage issues, must be completed to insure that a second access road is feasible. Otherwise, the development application must be denied.

The report also fails to provide enough information regarding potential travel distance or runout of landslides. The nearby Woodway slide had a runout distance of almost 800 feet. As page 30 of the report indicates, "additional evaluations would be needed during design to better assess potential landslide runout and design mitigation for the different areas of the slope and development." Estimation of runout, a detailed evaluation of static slope stability, and a better estimate of slope displacement during seismic events are also necessary to determine whether the development in the Upper Bench can occur safely. There is not enough information to reduce prescriptive slope setbacks or to approve the Landslide Area Deviation Request (Exhibit C-27).

Please reject the Point Wells Urban Center application. There are many issues where BSRE has not complied with Snohomish County Code beyond the ones that I have raised above. After 5 years of time to respond to corrections, there is no reason to believe that BSRE will be responsive if they are provided with another extension.

Sincerely,

Susan Chang, Ph.D., P.E. 20109 24th Ave NW